

The data packet is also input to the transmission power correction unit **123** which derives the transmission power control signal inserted in the data packet and inputs it to the traffic channel gain calculator **124**. The traffic channel gain calculator **124** calculates a gain of the variable gain amplifier **68** to renew the gain, similar to the first embodiment.

With the base station and mobile terminals having the above structures and operating in the above manner, it becomes possible for a mobile terminal to perform transmission/reception of a data packet to/from the base station and reception of transmission power control by the base station, by using either the answer channel or traffic channel. Therefore, it is sufficient if only the mobile terminal has one set of a detector and a decoder, and so the circuit scale of the mobile terminal can be prevented from becoming large.

In the above embodiments, the invention has been applied to a mobile communication system of a reservation based access control scheme in which a base station transmits a transmission power control signal to each mobile terminal by using an answer channel. The invention is also applicable to a channel other than the answer channel if it is a common channel shared by mobile terminals. Namely, if a system uses a common channel shared by mobile terminals, the base station can perform transmission power control of a plurality of mobile terminals by transmitting transmission power control signals via the single common channel. Obviously, a channel dedicated to transmission power control may be provided to perform transmission power control of mobile terminals by transmitting transmission power control signals from the base station by using this dedicated channel.

While the present invention has been described above in conjunction with the preferred embodiments, one of ordinary skill in the art would be enabled by this disclosure to make various modifications to this embodiment and still be within the scope and spirit of the invention as defined in the appended claims.

What is claimed is:

1. A transmission power control method for a CDMA communication system, comprising: a base station and a plurality of mobile terminals performing communication by CDMA;
 - a plurality of said mobile terminals transmitting over uplink traffic channels to said base station;
 - said base station measuring the reception level of a signal transmitted from each of said plurality of mobile terminals, generating a transmission control signal in accordance with the reception level and a common transmission power control signal containing said transmission power control signals of said plurality of mobile terminals; spreading said common transmission power control signal with a spreader, and transmitting said spread common transmission power control signal through a common channel shared by said mobile terminals;
 - each of said plurality of mobile terminals receiving said common transmission power control signal, deriving a corresponding one of said transmission power control signals from said common transmission power control signal, and controlling the transmission power of a signal to be transmitted to said base station in accordance with said derived transmission power control signal.
2. A transmission power control method according to claim 1, wherein said transmission power control signal is a signal indicating an increase/decrease of said transmission

power and obtained through comparison between said reception level and a predetermined reference reception level.

3. A transmission power control method for a CDMA communication system which performs communication between a base station and a plurality of mobile terminals by CDMA, wherein:

said plurality of channels includes first channels allocated to said mobile terminals for transmitting a data packet to said base station and a second channel used by said base station, said second channel being shared by said plurality of mobile terminals;

said base station measures the reception level of a signal received at each of said first channels, generates a transmission power control signal in accordance with the reception levels and a common transmission power control signal containing said transmission power control signals of said plurality of mobile terminals, spreads said common transmission power control signal with a spreader, and transmits said spread common transmission power control signal through a said second channel shared by said mobile terminals; and

each of said plurality of mobile terminals receives said transmission power control signal destined thereto at said second channel, and controls the transmission power of a signal to be transmitted via a corresponding one of said first channels in accordance with said received transmission power control signal.

4. A transmission power control method according to claim 3, wherein each of said first channels is allocated to each of said plurality of mobile terminals, said base station comprises third channels for transmitting data packets to said plurality of mobile terminals, and either a pair of said first channel and said third channel or only said first channel is allocated by said base station to said plurality of mobile terminals.

5. A transmission power control method for communication system which performs communication between a base station and a plurality of mobile terminals by CDMA, wherein:

a plurality of said mobile terminals transmit over uplink traffic channels to said base station;

said base station measures the reception level of a signal transmitted from each of said plurality of mobile terminals, generates a transmission power control signal in accordance with the reception level and a common transmission power control signal containing said transmission power control signals of mobile terminals performing one way communication, said common transmission power control signal is spread with a spreader, and said base station transmits said spread common transmission power control signal through a common channel shared by said mobile terminals and transmits a transmission signal containing a transmission power control signal of a mobile station performing two way communication thereto; and

each of said plurality of mobile terminals receives said common transmission power control signal or said transmission signal, derives a corresponding one of said transmission power control signals destined thereto from said common transmission power control signal or from said transmission signal, and controls the transmission power of a signal to be transmitted to said base station in accordance with said derived transmission power control signal.

6. A CDMA communication system for performing CDMA communication between a base station and a plurality of mobile terminals via a plurality of channels, wherein: